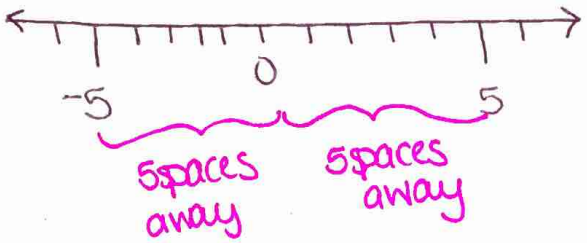
Absolute Value

- the distance away from zero



both -5 & 5 are 5 spaces away from zero

$|5| = 5$ $|-5| = 5$

absolute value bars

examples

$|-7| =$ ___ $|3| =$ ___ $|-100| =$ ___

solving

$|x| = 10$, what makes this true? 10 & -10

$x = 10$ $x = -10$

make 2 equations one positive answer, one negative answer

examples

$|x| = 15$

$|x+1| = 7$

$x+1 = 7$ $x+1 = -7$

$x = 6$ $x = -8$

* solve for absolute value alone 1st

$2|x| - 1 = 7$

$2|x| = 8$

$|x| = 4$

$x = 4$ $x = -4$

$\frac{3|x-2|}{3} = \frac{15}{3}$

$|x-2| = 5$

$x-2 = 5$ $x-2 = -5$

$x = 7$ $x = -3$

$\frac{-|x+1|}{-1} = \frac{-7}{-1}$

$|x+1| = 7$

$x+1 = 7$ $x+1 = -7$

$x = 6$ $x = -8$